

IMRON® 2.1 HG™

HIGH GLOSS POLYURETHANE (INCLUDES MIX QUALITY VF)

Imron[®] 2.1 HG[™] High Gloss Aliphatic Polyurethane Enamel is a high-solids, two-package, VOC conforming, 2.1 lbs./gal.,low HAPS product based on patented DuPont resin technology, producing properties of both polyester and acrylic polyurethane. The resulting highly durable finish delivers industry leading polyurethane performance.

SUGGESTED USES

As a high performance topcoat over suitable primers or tie coats on steel, galvanized steel, stainless steel, aluminum, concrete, concrete block, fiberglass, plastics and wood where:

- Outstanding gloss and color retention are desired
- Excellent resistance to chemical and/or marine environments is required.
- Outstanding abrasion resistance and flexibility are required.
- Application by brush and roller, in addition to spraying, may be necessary.
- Application must be made at temperatures as low as 35° F.

NOT RECOMMENDED FOR:

Immersion Service

COMPATIBILITY WITH OTHER COATINGS

Imron® 2.1 HG[™] can be applied over other DuPont Industrial Coatings including, but not limited to, Imron® Waterborne Polyurethane Copolymer coatings, Corlar® epoxies, Tufcote® acrylics, Tufcote® alkyd primers, and DuPont WP[™] wash primer. Imron® 2.1 HG[™] may also be used over Ganicin® zinc rich coatings if a tie coat is used.

Imron[®] 2.1 HG[™] may be used over most aged and hard-cured coatings in good condition. Testing for lifting, bubbling and adhesion is recommended to assure compatibility with unknown coatings. Contact your DuPont Performance Coating representative for specific recommendations.

MAXIMUM SERVICE TEMPERATURE

250°F (93°C) in continuous service.

300°F (148°C) in intermittent heat.

Some yellowing of light colors may occur at elevated temperatures.

PERFORMANCE PROPERTIES*

Abrasion & Mechanical Abuse Excellent Acids Excellent Excellent Excellent Color & Gloss Retention Alkalis Excellent Salts Excellent Humidity Solvents Very Good Weather Excellent

VOC (THEORETICAL) (AVERAGE VARIES WITH COLOR)

Mixed VOC, no reduction

Mixed VOC, @ maximum recommended reduction

2.0 lbs./gal. (241 g/l)

& 2 oz. MasterTint® 389S[™] or 2 oz. Imron® VHY-691[™] Accelerator

2.1 lbs./gal. (252 g/l)

Mixed HAPS, no reduction 0.81 lbs/gal of solids

Mixed HAPS @ maximum recommended reduction

& 2 ozs; MasterTint® 389S™ or 2 oz. Imron® VHY-691™ Accelerator 0.81 lbs/gal of solids

All technical advice, recommendations and services are rendered by the Seller gratis. They are based on technical data which the Seller believes to be reliable, and are intended for use by persons having skill and know-how at their own discretion and risk. Seller assumes no responsibility for results obtained or damages incurred from their use by Buyer in whole or in part. Such recommendations, technical advice or services are not to be taken as a license to operate under or intended to suggest infringement of any existing patent.

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Printed in U.S.A. Page 1 of 5 E-R4279 / K-10672, 01/06



Industrial Coatings

IMRON® 2.1 HGTM High Gloss Polyurethane

COLOR (CUSTOM COLORS ALSO AVAILABLE AS A MIX, "VF" QUALITY)

White 1333-67632 Black 1333-67640 Clay Tan 1333-67635

Shale Grey 1333-67633 Cirrus Grey-1333-67637 Safety Red 1333-23664 Safety Yellow 1333-23663 Safety Orange 1333-23662 Safety Blue 1333-23665 Safety Green 1333-23666

GLOSS (ASTM D523):

>90 measured @ 60° angle.

CURE TIME - HOURS @ 77°F (25°C), 50% R.H. @ 1.5-2.0 MILS SUGGESTED DFT

	Without	Hours w/2 oz.	
	Accelerator	<u>MasterTint[®] 389S</u> [™]	
Dry to Touch	3 hrs	1.5 hrs	
Dry to Recoat	4 hrs	2 hrs	
Dry To Handle	4.5 hrs	2.5 hrs	
Pack/Ship	24 hrs	8 hrs	
Full Cure	7 days	4 days	
Pot Life	1 hrs	2hrs	
*See Additional Cor	nments #1 & 2		

THEORETICAL COVERAGE PER GALLON*

1074 FT2 (26.1 m2/L) @ 1 mil

537FT2 (13.1 m2/L) @ suggested DFT of 2 mils

*Material losses during mixing and application will vary and must be taken into consideration when estimating job requirements.

SUGGESTED FILM BUILD

2.5 - 3.5 mils $(57 - 75 \mu m)$ wet (WFT) 1.5 - 2 mils $(37 - 50 \mu m)$ dry (DFT)

VOLUME SOLIDS (MIXED):

67%± 2% Varies by Color

WEIGHT SOLIDS (MIXED):

73% ± 3% Varies by Color

WEIGHT PER GALLON (MIXED):

8.9-11.6 lbs. (4.1 - 5.2 kg) Varies by Color

FLASH POINT (TAG CLOSED CUP)

Between 20 to 73° F (-6 to 23° C)

PACKAGING

Enamel:

1's (75% full)

5's (containing 3 gallons)

Activator:

Quarts and gallons

SHIPPING WEIGHT (LBS) APPROXIMATE/AVG.

Enamel:

1 gallon container – 10

5 gallon container - 35

Activator: 1 quart container – 3

1 gallon container – 12

SHELF LIFE & STORAGE CONDITIONS

- Store in a dry, well-ventilated area. Storage temperatures should be between -30° F (-34° C) and 120° F (48° C).
- ♦ Shelf life 1 year minimum

SAFETY INSTRUCTIONS

Consult the Material Safety Data Sheet for this product prior to use.



IMRON® 2.1 HG™ **High Gloss Polyurethane**

APPLICATION INFORMATION

SURFACE PREPARATION

Newly primed surfaces should be clean and dry. If contaminated, detergent/water wash, then blow dry. Previously painted surfaces should have all loose paint removed and the edges feathered. Prime bare spots with appropriate

ACTIVATION

Thoroughly mix 3 parts Imron® 2.1 HG[™] Enamel (1333-XXXXX), then add 1 part of Imron® FG-1333[™] Activator mix well

No induction period is necessary.

POT LIFE

1 hour @ 77°F and 50% RH without accelerator.

2 hours @ 77°F and 50% RH with 2 oz./mixed gallon MasterTint® 389S™ accelerator, 15% T-1022,

REDUCTION

Normally 10% -15% reduction is adequate for spray application depending upon conditions and equipment. To help maximize pot-life, up to 15% maybe added. Add 10%-15% DuPont T-1021[™] or T-1022[™] Thinner for brush and roll application. If bubbles develop during roller application, add 1 oz. DuPont RT002P[™] per activated gallon. After addition, allow 5 minutes induction before application. Use DuPont T-1021[™] Thinner for normal conditions below 80° F and DuPont T-1022 Thinner for hot and windy conditions above 80° F. If faster recoat and handling are required, add up to 2 oz. MasterTint® 389S™ or up to 2 oz. DuPont VHY691™. To maximize pot-life use 2 ozs 389S.

APPLICATION THINNERS & ADDITIVES

Spray: DuPont T-1021[™] – Below 80°F DuPont T-1022[™] – Above 80°F

Brush: DuPont T-1021 - Below 80°F

DuPont T-1022™ - Above 80°F

DuPont T-1021 & RT002P - Below 80°F Roll:

DuPont T-1022™ & RT002P™-- Above 80°F

CLEANUP THINNERS

DuPont T-1021[™] or Acetone

APPLICATION CONDITIONS

Do not apply if the application surface temperature is below 45°F (7°C) or above 110°F (43°C), or if the atmospheric temperature is within 5°F of the dew point. For application temperatures below 45°F, the use of Imron® VHY-691™ is recommended. Relative Humidity should be below 90%.

APPLICATION EQUIPMENT

- Apply by spray, brush or roll
- Manufacturers listed below are a guide. Others may be used. Changes in pressure and tip size may be required to achieve proper application.

AIR SPRAY

Manufacturer	DeVilbiss	Sata
Spray Gun	JGA	K3 RP
Fluid Tip	FF (1.4)	1.1
Air Cap	765	-
Pot Pressure	15 psi	15 psi
Atomizing Pressure	50 psi	36 psi



Industrial Coatings

IMRON® 2.1 HG™ **High Gloss Polyurethane**

AIRLESS SPRAY

Manufacturer

Graco

Pump

Xtreme 33:1

Filter

60 Mesh

Fluid Hose

3/8" X 100' Max.

Spray Gun

238591

Tip Size Pressure

.411-.611 2400 psi min

AIR ASSISTED AIRLESS

Manufacturer

Graco

Pump

Senator 12:1

Spray Gun Tip Size

217292 .023 - .029

Fluid Hose

3/8" X 50' Max.

HVLP

Manufacturer

DeVilbiss

Spray Gun

GTI

Tip Size

1.4 mm

Air Pressure Fluid Hose

10 psi @ air cap

Fluid Delivery

3/8" X 60' Max. 10 - 12 oz

Air Cap

2000

ROLL

Manufacturer:

Additions:

Wooster® Pro/Doo-Z™ ¼: - ½" nap. Add 1 oz./gallon DuPont RT002P™ Rolling Thinner to eliminate bubbles. Craters may

develop if you exceed 2 oz./gallon.

Add 10-15% DuPont T-1021 or T-1022[™] Thinner to maintain wet edge.

May be cross-rolled.

For best results, allow 5 minutes mix time after adding DuPont RT002P

Do not use DuPont RT002P[™] in spray applications.

BRUSH

Manufacturer: Additions:

Wooster® China Bristle

Add 10-15% DuPont T-1021 or T-1022[™] Thinner to maintain wet edge. Do not cross brush to reduce lap marks. Add up to 1 oz./gallon DuPont RT002P™ Rolling Thinner to eliminate

bubbles.

For best results, allow 5 minutes mix time after adding DuPont RT002P™

Do not use DuPont RT002P[™] in spray applications.

ADDITIONAL COMMENTS

Dry times can be improved by adding up to 2 oz. MasterTint® 389S™ or DuPont VHY691™ Accelerator per activated gallon. The use of Mastertint® 389S is recommended to maximize pot life.

2. May be recoated by spray when tack-free.

3. Add 1 oz./gallon DuPont RT002P[™] to eliminate bubbles that form during rolling. DuPont RT002P[™] is not recommended for spray application. Do not exceed 2 oz./gallon DuPont RT002P™ as craters may develop.

4. If accelerators have been used, recoating must be done within 48 hours. If more time has elapsed, scuff sand to

5. Imron® 2.1 HG is also available in a mix or variable gloss qualities.

VF-High Gloss

VG-Semi Gloss

VH-Satin Gloss

VI-Flat

When making Mix or variable gloss qualities, 780P binder and/or 781P Flat Clear Binder must be used.

IMRON[®] 2.1 HG[™] High Gloss Polyurethane

% Retention:

94%

ASTM INFORMATION

Physical properties are averages. Properties listed are for a system of Corlar® 2.1 ST (formerly 25P) and Imron® 2.1HG. Total DFT 7 mils.

•	Salt Fog (ASTM B-117)	500 hours 1000 hours 1500 hours	No rust, no blistering No rust, no blistering No rust, few #8 blisters at the scribe No undercutting.
•	Humidity Resistance(ASTM D2247)	500 hours 1000 hours	No rust , no blistering No rust, few #8 blisters No rust, few #8 blisters
•	Adhesion (ASTM D4541 -02) Adhesion (ASTM D3359-02 A/B)	1753 psi 5/5	Excellent Excellent
•	QUV A (ASTMD4587)	1500 hours	Gloss before: 95.2 Gloss after: 89.9

SELECT CHEMICAL REISITANCE – The following are chemical resistance ratings for 24 hour watch glass testing. Rating scale used was a scale 1-10, 10 being the best.

1% HCL (Hydrochloric Acid) 1% H2SO4 (Sulfuric Acid) 10		Rating		Rating	
1%H2SC4 (Sulfuric Acid) 10 Motor Cli - Motil 10W30 10 1%H2SC3 (Sulfuric Acid) 10 Hydraulic Cli - Permacil 10 1%H3PC4 (Phosphoric Acid) 10 Outling Cli - Rigid 10 10%H3PC4 (Phosphoric Acid) 10 Uhleaded Gas 10 1%NH4CH (Armonium Hydroxide) 10 Tick Scap 10 1%NH4CH (Armonium Hydroxide) 10 Fartastic 10 1%NH4CH (Armonium Hydroxide) 10 Husehold Bleach 10 1%NHACH (Sodium Hydroxide) 10 Husehold Bleach 10 1%NHACH (Sodium Hydroxide) 10 Isaprop) Alachd 9 VMP Naptha 10 29%NH4CH (Armonium Hydroxide) 9 10% NaCH (Sodium Hydroxide) 9 Bihyl Acetate 7 10% NaCH (Sodium Hydroxide) 9 Bihyl Acetate 7 10% HNC3 (Nitric Acid) 7 Armatic Hydroxide 5 7 MEK (Methyl Ethyl Ketone) 7 Armatic Hydroxide 5 8 Total Representation of thydroxide 5 Acetic Acid			Mneral Spirits	10	٦
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